

# DEVELOPMENT GUIDE

## Requirement Analysis

### Development Background

Base pair, DNA, protein, organelle, cell, tissue, organ, system, individual, population, community, ecosystem, biosphere, these are a very important concept in biology. In order to transmit the concept through a more lively and interesting way, our team design Bio2048, an Android game.

### Project Objective

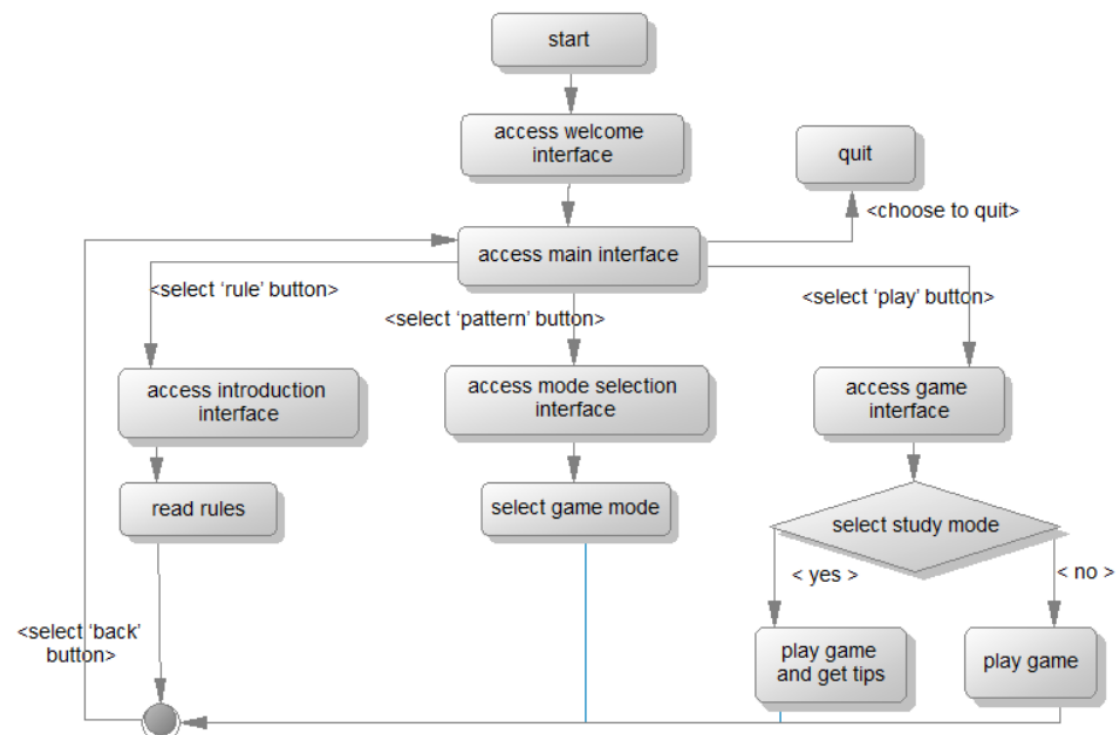
1. The Android mobile phone game.
2. Realize the game mode of judging the finger movement to operate the picture in the board.
3. In the game process, the program is able to indicate the biological significance of the different pictures.
4. The board must have a variety of types.
5. There must be a detailed introduction of rules.
6. Game experience must be friendly.

### Operating Environment

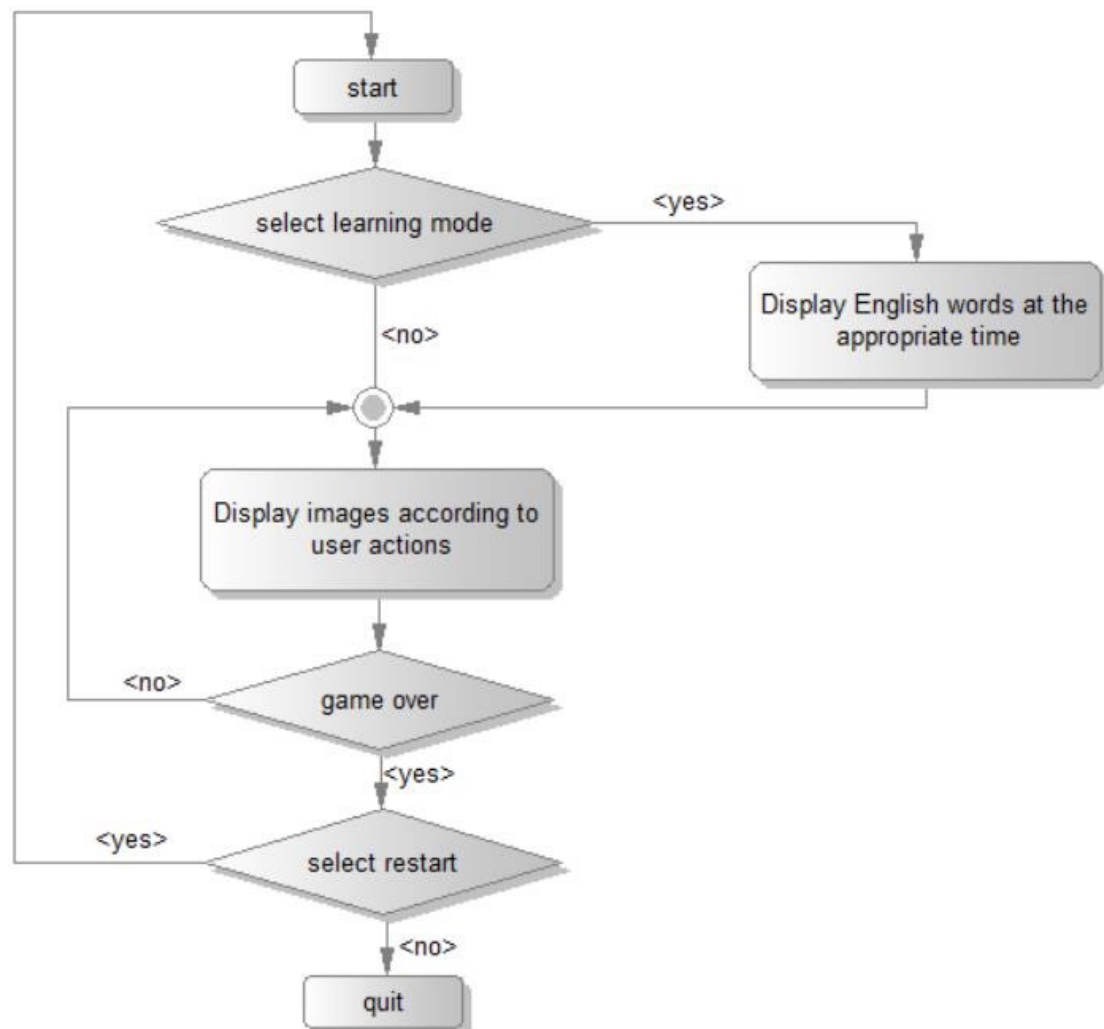
Android 4.0 and above versions.

## Program Flow Diagram

### Overall Flow Chart



Game Interface Flow Chart

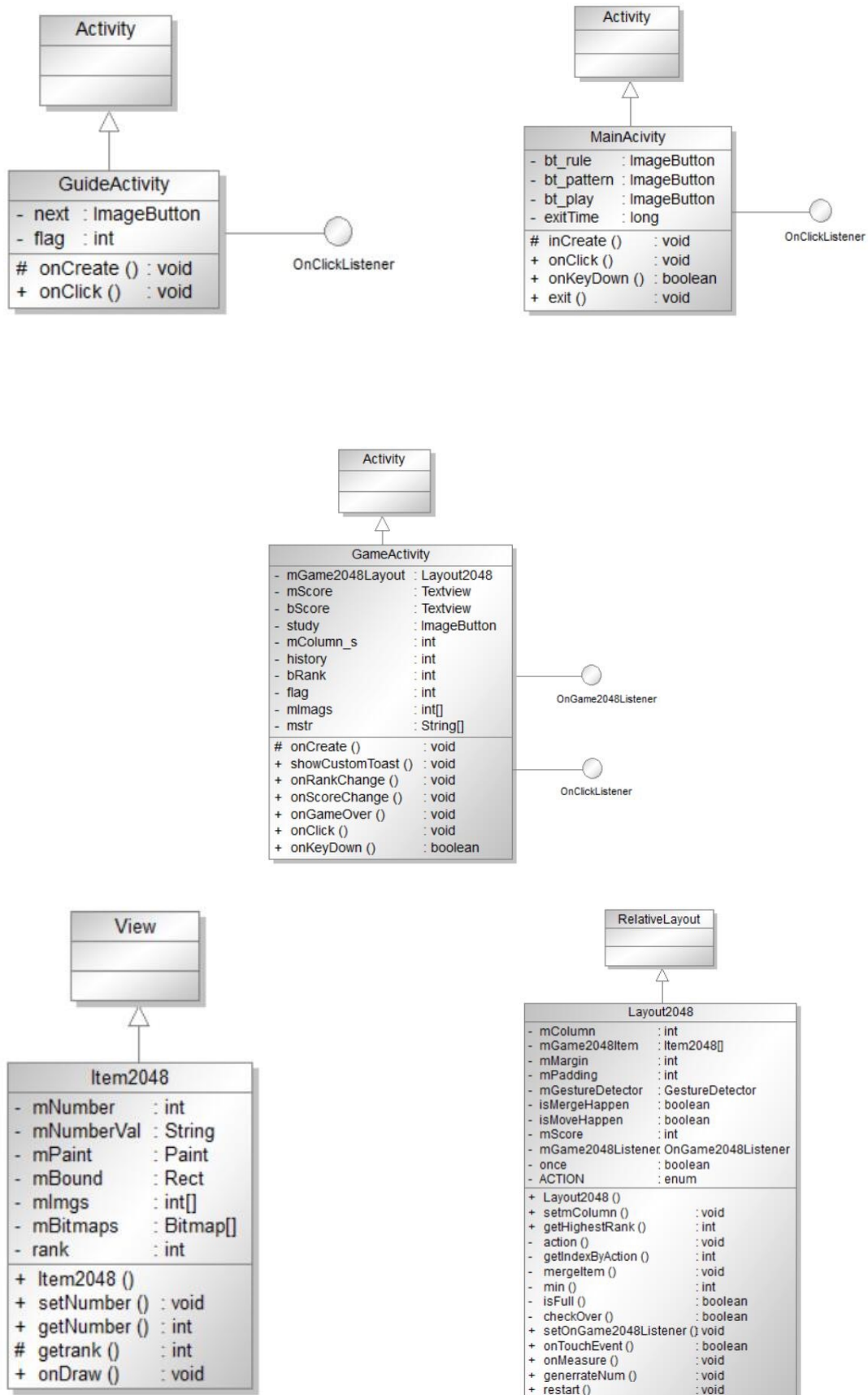


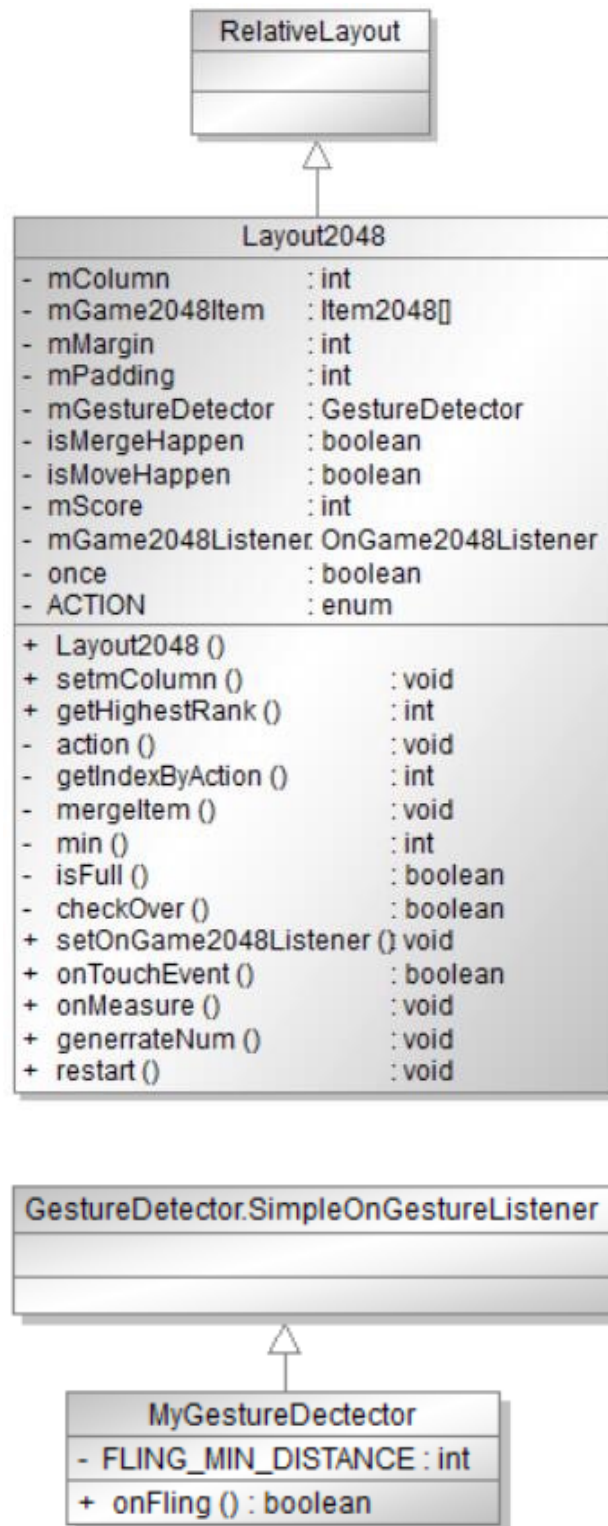
## UML Class Diagram

1. "2048" game mode is realized through a custom view and custom RelativeLayout.
2. Through custom Toast to realize the function that program can prompt words corresponding to the patterns.
3. Through the Android platform default other controls to achieve the other auxiliary functions of the game.

The following are the UML diagrams of the game:

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## Disadvantages

1. When the game is over, users need to slide again for popping a prompt box showed "Game Over". It's not friendly so that we will improve that.

2. When users choose 5\*5 board, the program may be stop. So this disadvantage needs to

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be improved.